2011

Test 2002A: John Deere 8260R MY12

Nebraska Tractor Test Laboratory
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NEBRASKA OECD TRACTOR TEST 2002A - SUMMARY 785A
JOHN DEERE 8260R DIESEL
16 SPEED

Location of tests: Nebraska Tractor Test Laboratory, University of Nebraska, Lincoln, Nebraska 68583-0832

Dates of tests: October 10 - 13, 2011

Manufacturer: John Deere Tractor Works, 3500 East Donald St., P.O. Box 270, Waterloo Ia, 50704-0270

FUEL, OIL and TIME: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F *(15°/15°C)*** 0.8409 **Fuel weight** 7.002 lbs/gal *(0.839 kg/l)* **Oil SAE** 15W-40 **API service classification** CJ-4 **Transmission and hydraulic lubricant** John Deere Hy-Gard fluid **Front axle lubricant** John Deere Hy-Gard fluid **Total time engine was operated:** 17.0 hours

ENGINE: Make John Deere Diesel **Type** six cylinder vertical with two turbochargers and air to air aftercooler **Serial No.***RG6090R002462* **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.661" x 5.354" *(118.4 mm x 136.0 mm)* **Compression ratio** 16.0 to 1 **Displacement** 548 cu in *(8984 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element and water separator **Fuel cooler** radiator for pump return fuel **Exhaust** regenerative particulate filter integrated within a vertical muffler **Cooling medium temperature control** 2 thermostats and variable speed fan

ENGINE OPERATING PARAMETERS: Fuel rate: 87.4 - 94.8 lb/h *(39.7 - 43.0 kg/h)* **High idle:** 2150 - 2250 rpm **Turbo boost:** nominal 23.2 -26.1 psi *(160 - 180 kPa)* as measured 25.1 psi *(173 kPa)*

CHASSIS: Type front wheel assist with duals **Serial No.***1RW8260RLBP042576* **Tread width** rear 60.0" *(1524 mm)* to 132.6" *(3368 mm)* front 60.0" *(1524 mm)* to 88.0" *(2235 mm)* **Wheelbase** 118.9" *(3020 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with full range operator controlled power shift **Nominal travel speeds mph *(km/h)*** first 1.17 *(1.88)* second 1.57 *(2.52)* third 2.09 *(3.36)* fourth 2.80 *(4.50)* fifth 3.14 *(5.05)* sixth 3.62 (*5.82)* seventh 4.20 *(6.76)* eighth 4.84 *(7.79)* ninth 5.59 *(9.00)* tenth 6.45 *(10.38)* eleventh 7.49 *(12.06)* twelfth 8.64 *(13.90)* thirteenth 10.17 *(16.38)* fourteenth 13.63 *(21.94)* fifteenth 18.15 *(29.21)* sixteenth 24.31 *(39.13)* reverse 1.09 *(1.76)*, 2.93 *(4.72)*, 3.70 *(5.96)*, 6.80 *(10.95)*@1500 engine rpm **Clutch** wet multiple disc hydraulically actuated by foot pedal **Brakes** wet multiple disc hydraulically operated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 1000 rpm at 2004 engine rpm **Unladen tractor mass** 25310 lb *(11480 kg)*

POWER TAKE-OFF PERFORMANCE

Power HP *(kW)*	Crank shaft speed rpm	Gal/hr *(l/h)*	lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1048 rpm)					
231.82 *(172.87)*	2099	13.12 *(49.67)*	0.396 *(0.241)*	17.67 *(3.48)*	
Standard Power Take-off Speed(1000 rpm)					
252.91 *(188.59)*	2003	13.84 *(52.39)*	0.383 *(0.233)*	18.27 *(3.60)*	
Maximum Power (1 hour)					
262.76 *(195.94)*	1751	13.95 *(52.80)*	0.372 *(0.226)*	18.84 *(3.71)*	
VARYING POWER AND FUEL CONSUMPTION					
231.82 *(172.87)*	2099	13.12 *(49.67)*	0.396 *(0.241)*	17.67 *(3.48)*	Air temperature
201.85 *(150.52)*	2154	11.87 *(44.95)*	0.412 *(0.251)*	17.00 *(3.35)*	74°F *(23°C)*
152.66 *(113.84)*	2164	9.37 *(35.47)*	0.430 *(0.261)*	16.29 *(3.21)*	Relative humidity
101.96 *(76.03)*	2175	7.17 *(27.13)*	0.492 *(0.299)*	14.23 *(2.80)*	42%
51.26 *(38.23)*	2185	4.98 *(18.84)*	0.680 *(0.413)*	10.30 *(2.03)*	Barometer
4.79 *(3.57)*	2192	4.42 *(16.73)*	6.460 *(3.930)*	1.08 *(0.21)*	28.87 Hg *(97.77 kPa)*

Maximum Torque - 842 lb.-ft. *(1142 Nm)* at 1550 rpm
Maximum Torque Rise - 45.1%
Torque rise at 1699 engine rpm - 39%
Power increase at 1751 rpm - 13.3%

DRAWBAR PERFORMANCE
UNBALLASTED - FRONT DRIVE ENGAGED
FUEL CONSUMPTION CHARACTERISTICS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Fuel Consumption Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
Maximum Power—8th Gear									
202.71 *(151.16)*	15766 *(70.13)*	4.82 *(7.76)*	2100	4.2	0.457 *(0.278)*	15.33 *(3.02)*	204 *(96)*	70 *(21)*	28.70 *(97.19)*
75% of Pull at Maximum Power—8th Gear									
157.89 *(117.73)*	11825 *(52.60)*	5.01 *(8.05)*	2159	3.2	0.486 *(0.296)*	14.41 *(2.84)*	199 *(93)*	77 *(25)*	28.64 *(96.99)*
50% of Pull at Maximum Power—8th Gear									
107.16 *(79.91)*	7892 *(35.11)*	5.10 *(8.20)*	2169	2.1	0.564 *(0.343)*	12.41 *(2.44)*	190 *(88)*	77 *(25)*	28.64 *(96.99)*
75% of Pull at Reduced Engine Speed—11th Gear									
157.55 *(117.49)*	11818 *(52.57)*	5.00 *(8.05)*	1392	3.1	0.431 *(0.262)*	16.23 *(3.20)*	209 *(98)*	78 *(25)*	28.63 *(96.95)*
50% of Pull at Reduced Engine Speed—11th Gear									
107.56 *(80.20)*	7880 *(35.05)*	5.12 *(8.24)*	1413	2.1	0.461 *(0.281)*	15.18 *(2.99)*	197 *(91)*	78 *(25)*	28.63 *(96.95)*

DRAWBAR PERFORMANCE

UNBALLASTED - FRONT DRIVE ENGAGED - 2100 RPM
MAXIMUM POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F *(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					5th Gear				
185.19 *(138.10)*	23175 *(103.09)*	3.00 *(4.82)*	2128	9.2	0.493 *(0.300)*	14.21 *(2.80)*	190 *(88)*	58 *(15)*	28.73 *(97.29)*
					6th Gear				
196.23 *(146.32)*	20919 *(93.05)*	3.52 *(5.66)*	2100	6.4	0.471 *(0.287)*	14.86 *(2.93)*	194 *(90)*	60 *(16)*	28.73 *(97.29)*
					7th Gear				
201.36 *(150.15)*	18203 *(80.97)*	4.15 *(6.68)*	2101	5.0	0.459 *(0.279)*	15.26 *(3.01)*	201 *(94)*	69 *(20)*	28.70 *(97.19)*
					8th Gear				
202.71 *(151.16)*	15766 *(70.13)*	4.82 *(7.76)*	2100	4.2	0.457 *(0.278)*	15.33 *(3.02)*	204 *(96)*	70 *(21)*	28.70 *(97.19)*
					9th Gear				
200.39 *(149.43)*	13404 *(59.62)*	5.61 *(9.02)*	2100	3.6	0.458 *(0.278)*	15.30 *(3.01)*	204 *(95)*	72 *(22)*	28.69 *(97.16)*
					10th Gear				
198.71 *(148.18)*	11486 *(51.09)*	6.49 *(10.44)*	2100	3.2	0.467 *(0.284)*	14.98 *(2.95)*	213 *(101)*	74 *(23)*	28.68 *(97.12)*
					11th Gear				
195.50 *(145.78)*	9682 *(43.07)*	7.57 *(12.18)*	2100	2.7	0.473 *(0.288)*	14.80 *(2.91)*	213 *(101)*	76 *(24)*	28.66 *(97.05)*
					12th Gear				
192.38 *(143.45)*	8223 *(36.58)*	8.77 *(14.11)*	2100	2.3	0.487 *(0.296)*	14.39 *(2.84)*	214 *(101)*	76 *(25)*	28.66 *(97.05)*

TRACTOR SOUND LEVEL WITH CAB	Front Wheel Drive Engaged dB(A)	Disengaged dB(A)
At no load in 8th gear	71.7	71.2
Transport speed - no load - 16th gear		73.0
Bystander in 16th gear		82.7

TIRES AND WEIGHT	Tested Without Ballast
Rear Tires - No., size, ply & psi(*kPa*)	Four 480/80R50;***;10(*70*)
Front Tires - No., size, ply & psi(*kPa*)	Two 420/85R34;***;20(*140*)
Height of Drawbar	20.5 in (*520 mm*)
Static Weight with operator - Rear	15415 lb *(6992 kg)*
- Front	10070 lb *(4568 kg)*
- Total	25485 lb(*11560 kg*)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

NOTE 1: During testing the engine was operated for 17.0 hours. During this period, the tractor experienced one active exhaust filter cleaning while operated in Auto Filter Cleaning Mode. This occured after 10.5 hours of operation.

NOTE 2: The manufacturer declared that the active exhaust filter cleanings consume an average of 0.04 gal/hr *(0.15 l/hr)* across total tractor use. Fuel consumed during the active exhaust filter cleanings will normally be less than 1% of the total fuel consumed. The manufacturer declared that no active exhaust filter cleanings occured during 12 hours of continuous operation of the tractor in the Auto Filter Cleaning Mode at 30% loading and the engine speed at which the maximum torque occurs.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD, SAE and Nebraska test procedures. For the maximum power tests the fuel temperature at the injection pump inlet was maintained at 110°F *(43°C)*. The pull in 5th gear was limited to avoid excessive tractor power hop. The performance figures on this summary were taken from a test conducted under the OECD Code 2 test code procedure.

Report reissued. Three point lift data for tractors denoted Model Year 12 added July, 2012.

We, the undersigned, certify that this is a true and correct report of official Tractor Test No. **2002A,** Nebraska Summary 785A, August 6, 2012.

Roger M. Hoy
Director

M.A. Hanna
P.J. Jasa
J.D. Luck
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE
UNBALLASTED-FRONT DRIVE ENGAGED - 1750 RPM
MAXIMUM POWER IN SELECTED GEARS

Power Hp *(kW)*	Drawbar pull lbs *(kN)*	Speed mph *(km/h)*	Crank-shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr *(kg/kW.h)*	Hp.hr/gal *(kW.h/l)*	Temp.°F*(°C)* cool-ing med	Air dry bulb	Barom. inch Hg *(kPa)*
					5th Gear				
185.37 *(138.23)*	23226 *(103.31)*	3.00 *(4.82)*	2127	9.2	0.493 *(0.300)*	14.19 *(2.80)*	190 *(88)*	58 *(14)*	28.72 *(97.26)*
					6th Gear				
201.55 *(150.30)*	22265 *(99.04)*	3.40 *(5.46)*	2061	7.9	0.472 *(0.287)*	14.85 *(2.92)*	197 *(92)*	61 *(16)*	28.73 *(97.29)*
					7th Gear				
219.13 *(163.41)*	21302 *(94.76)*	3.86 *(6.20)*	1995	6.9	0.448 *(0.272)*	15.63 *(3.08)*	204 *(96)*	69 *(20)*	28.70 *(97.19)*
					8th Gear				
228.39 *(170.31)*	20086 *(89.35)*	4.27 *(6.86)*	1895	6.1	0.435 *(0.265)*	16.09 *(3.17)*	210 *(99)*	71 *(22)*	28.69 *(97.16)*
					9th Gear				
228.66 *(170.51)*	18724 *(83.29)*	4.58 *(7.37)*	1750	5.4	0.431 *(0.262)*	16.25 *(3.20)*	213 *(100)*	73 *(23)*	28.68 *(97.12)*
					10th Gear				
230.01 *(171.51)*	16171 *(71.93)*	5.33 *(8.58)*	1750	4.7	0.428 *(0.260)*	16.36 *(3.22)*	213 *(101)*	74 *(24)*	28.68 *(97.12)*
					11th Gear				
227.94 *(169.97)*	13689 *(60.89)*	6.25 *(10.05)*	1750	4.3	0.432 *(0.263)*	16.21 *(3.19)*	214 *(101)*	77 *(25)*	28.66 *(97.05)*
					12th Gear				
227.43 *(169.59)*	11791 *(52.45)*	7.23 *(11.64)*	1751	3.4	0.435 *(0.265)*	16.09 *(3.17)*	214 *(101)*	77 *(25)*	28.65 *(97.02)*
					13th Gear				
224.99 *(167.78)*	9827 *(43.71)*	8.59 *(13.82)*	1750	2.7	0.441 *(0.268)*	15.88 *(3.13)*	214 *(101)*	77 *(25)*	28.65 *(97.02)*

HYDRAULIC PERFORMANCE

CATEGORY: III/IVN
Quick Attach: Yes
OECD Static test

		Lift cylinders	Category
Maximum force exerted through whole range:	14191 lbs *(63.1 kN)*	1x90 mm &1x100 mm	III
	17719 lbs *(78.8 kN)*	1x100 mm&1x112 mm	III
	18326 lbs *(81.5 kN)*	2x100 mm	IVN

	63 cc pump	85 cc pump
i) Sustained pressure at compensator cutoff:	2898 psi *(200 bar)*	2925 psi *(202 bar)*
three outlet sets combined		
ii) Pump delivery rate at minimum pressure and rated engine speed:	48.0 GPM *(181.7 l/min)*	63.6 GPM *(240.8 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	47.8 GPM *(180.9 l/min)*	63.3 GPM *(239.4 l/min)*
Delivery pressure:	2590 psi *(179 bar)*	2468 psi *(170 bar)*
Power:	72.2 HP *(53.9 kW)*	91.1 HP *(67.9 kW)*
single outlet set		
ii) Pump delivery rate at minimum pressure and rated engine speed:	38.0 GPM *(143.9 l/min)*	37.4 GPM *(141.4 l/min)*
iii) Pump delivery rate at maximum hydraulic power:	37.4 GPM *(141.7 l/min)*	35.5 GPM *(134.3 l/min)*
Delivery pressure:	2131 psi *(147 bar)*	2229 psi *(154 bar)*
Power:	46.5 HP *(34.7 kW)*	46.2 HP *(34.4 kW)*

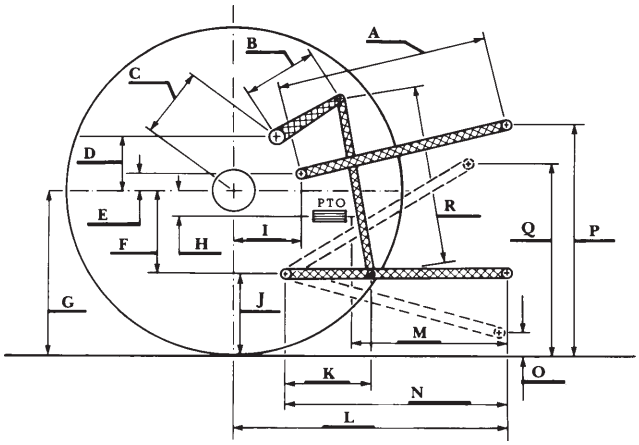
The following data applies to tractor chassis S/N's 1RW8260RTBP053101 and higher

	Lift cylinders	Category
Maximum force exerted through whole range:		
14590 lbs *(64.9 kN)*	1x90 mm &1x100 mm	III
18839 lbs *(83.8 kN)*	1x100 mm&1x115 mm	III
20000 lbs *(89.0 kN)*	2x115 mm	IVN

HITCH DIMENSIONS AS TESTED—NO LOAD

	category III		category IVN	
	inch	*mm*	inch	*mm*
A	28.9	*735*	27.9	*710*
B	20.5	*520*	20.5	*520*
C	20.9	*532*	20.9	*532*
D	18.9	*480*	18.9	*480*
E	12.0	*304*	12.0	*304*
F	14.4	*365*	14.4	*365*
G	37.4	*950*	37.4	*950*
H	7.9	*200*	7.9	*200*
I	21.9	*555*	21.9	*555*
J	23.0	*585*	23.0	*585*
K	28.9	*733*	28.9	*734*
L	49.3	*1252*	49.7	*1262*
*L'	53.4	*1357*	55.6	*1412*
M	22.4	*569*	22.8	*579*
N	38.4	*976*	38.8	*986*
O	9.0	*230*	9.0	*230*
P	50.1	*1272*	50.1	*1272*
Q	42.1	*1070*	43.1	*1095*
R	45.3	*1150*	44.9	*1140*

*L' to Quick Attach ends



JOHN DEERE 8260R DIESEL

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